

III. REMARKS

Status of the Claims

Claims 1 and 11-19 are canceled. New Claims 20-29 are submitted for consideration.

Applicant has amended the claims to clarify the novel features of the invention for which protection is sought in this application.

Summary of the Office Action

Claims 1, 12-15 and 17-19 stand rejected under 35USC103(a) on the basis of the cited reference Jaing et al., U.S. Patent No. 6,213,651 in view of the reference Paurus, et al, U.S. Patent No. 5,448,511. Claims 11 and 16 stand rejected under 35USC103(a) based on the cited reference Jaing et al., in view of Paurus and further in view of Nicewarner, Jr., U.S. Patent No. 5,776,797. The Examiner is respectfully requested to reconsider his rejection in view of the above amendment to the claims and following remarks.

The Invention

New Claim 20 is directed to an electro-optical connector module, i.e. a connector with electrical contacts on one side and optical connections on the other side intended to connect e.g. an optical fiber to an electrical circuit. A basis for this claim is found on page 3, lines 28-30 of the application as filed and is also supported by figures 1, 2 and 5.

It is submitted that the subject-matter of independent claim 20 is new and involves an inventive step over the prior art cited by the Examiner in the pending office action.

Discussion of the Cited References

The reference Jiang is cited in primary support of the examiner's rejection based on obviousness. In the system of the cited reference fiber optic transmitter and receiver elements are mounted on two separate parallel boards connected perpendicularly to a base system printed circuit board.

The Examiner agrees that there is no teaching in Jiang of the use of flexible sheets folded to provide multiple parallel overlapping panels, such panels being designed to provide a series of supporting surfaces for electro/optical circuits. The circuit boards 106 and 108 of Jiang are independently mounted in slots 240 on base 205.

The reference Jaing relates to a fiber optic module comprising a receive and/or a transmit PCB, on which are mounted electrical components. The module further includes an optical block which receives optoelectronic device(s) (receiver and/or transmitter) for converting light from optical fibers into electrical signal or vice-versa. For instance it is explained that the light transmitter includes an emitter for generation of light in response to electrical signals from the transmit PCB, whereas the light receiver includes a light detector which generates electrical signals towards the receiver PCB in response to light (see col. 6, lines 38-43 of Jaing).

Nevertheless, this document fails to disclose an opto-electronic connector module comprising an electrical connection section for receiving contact elements in which some contacts serve to guide an electrical signal that is to be converted and transmitted or a

received signal, whereas other will serve for connecting a power supply and grounding of the electrical components contained in the module (see p. 4, lines 8-12 of the application as filed).

In order to remedy the above deficiencies of the teaching of Jiang, the Examiner has now cited the reference Paurus, et al. The disclosure of Paurus relates to a means by which multiple memory elements are stacked for compact mounting and interconnection, while facilitating heat conduction away from the memory elements. (see abstract of Paurus). The teaching of Paurus therefore, bears no relevance to the claims of this application or with respect to the disclosure of Jiang.

The teachings of Jiang and Paurus are not compatible, as the packaging goals are significantly different in the two technologies. A person skilled in the art of designing fiber optic transmitters would not investigate memory stack designs to improve their product. Applicant submits that a combination of the teachings of Jiang and Paurus to obtain the configuration of the subject invention would not be obvious to one skilled in the art.

Further there is nothing in either Jiang or Paurus to indicate that a combination of the complex folded substrate module for a memory stack would be possible or advantageous in the manufacture of the fiber optic transmitter of Jiang.

The Examiner further combines the teachings of Jiang and Paurus with the cited reference Nicewarner, Jr. The teaching of Nicewarner relates to a means by which integrated circuits may be compactly packaged through the use of a foldable, flexible substrate. Nicewarner involves yet another technology, unrelated to connector modules for fiber optic systems. There is nothing

in Nicewarner that relates to the teachings of Jiang and Paurus.

Neither US 5,448,511 nor US 5,766, 797 are, therefore, relevant with respect to the novelty of the subject matter of the claims of this application. Summarizing:

- the '797 patent pertains to a three dimensional flexible assembly of integrated circuits;
- the '511 patent relates to memory stack comprising flexible or rigid/flexible interconnect device.

These documents do not relate to the opto-electronic connector technical field.

The Issue of Obviousness

According to basic tenets of patent law, in order to support an obviousness rejection, there must be some suggestion of the desirability of making the modification, aside from the subject application. The claimed invention must be considered as a whole and the references must suggest the desirability and thus the obviousness of making the modification, the references must be viewed without the benefit of hindsight. (See MPEP sections 706.02(a) and 2141. Applicant submits that the modification of the teachings of Jiang and Paurus, as well as the combined teachings of Jiang, Paurus and Nicewarner in order to obtain the invention, as described in the claims submitted herein, would not have been obvious to one skilled in the art. There is no indication that such combinations would be possible or desirable.

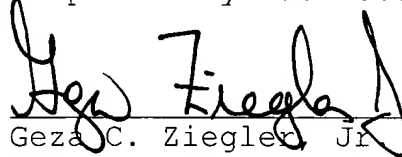
The above arguments apply equally to new claims 20-29.

In view of the remarks stated above, Applicant submits that all of the claims under consideration contain patentable subject

matter and favorable action by the Examiner is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge payment for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,


Geza C. Ziegler, Jr.
Reg. No. 44,004

24 JUNE 2005
Date

Perman & Green, LLP
425 Post Road
Fairfield, CT 06824
(203) 259-1800
Customer No.: 2512

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